

COMPUTER-AIDED PROGRESSIVE DIE
DESIGN SYSTEM AND METHOD

Inventor: Shengming Liu

FIG. 1A

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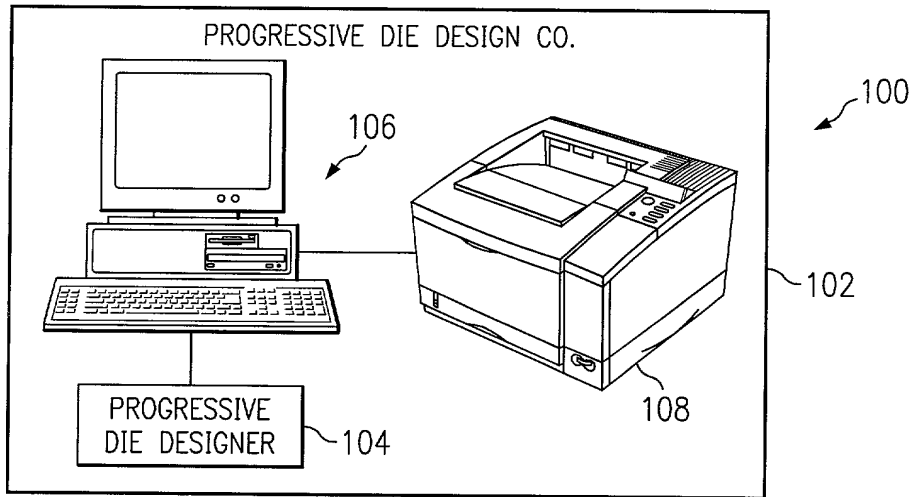
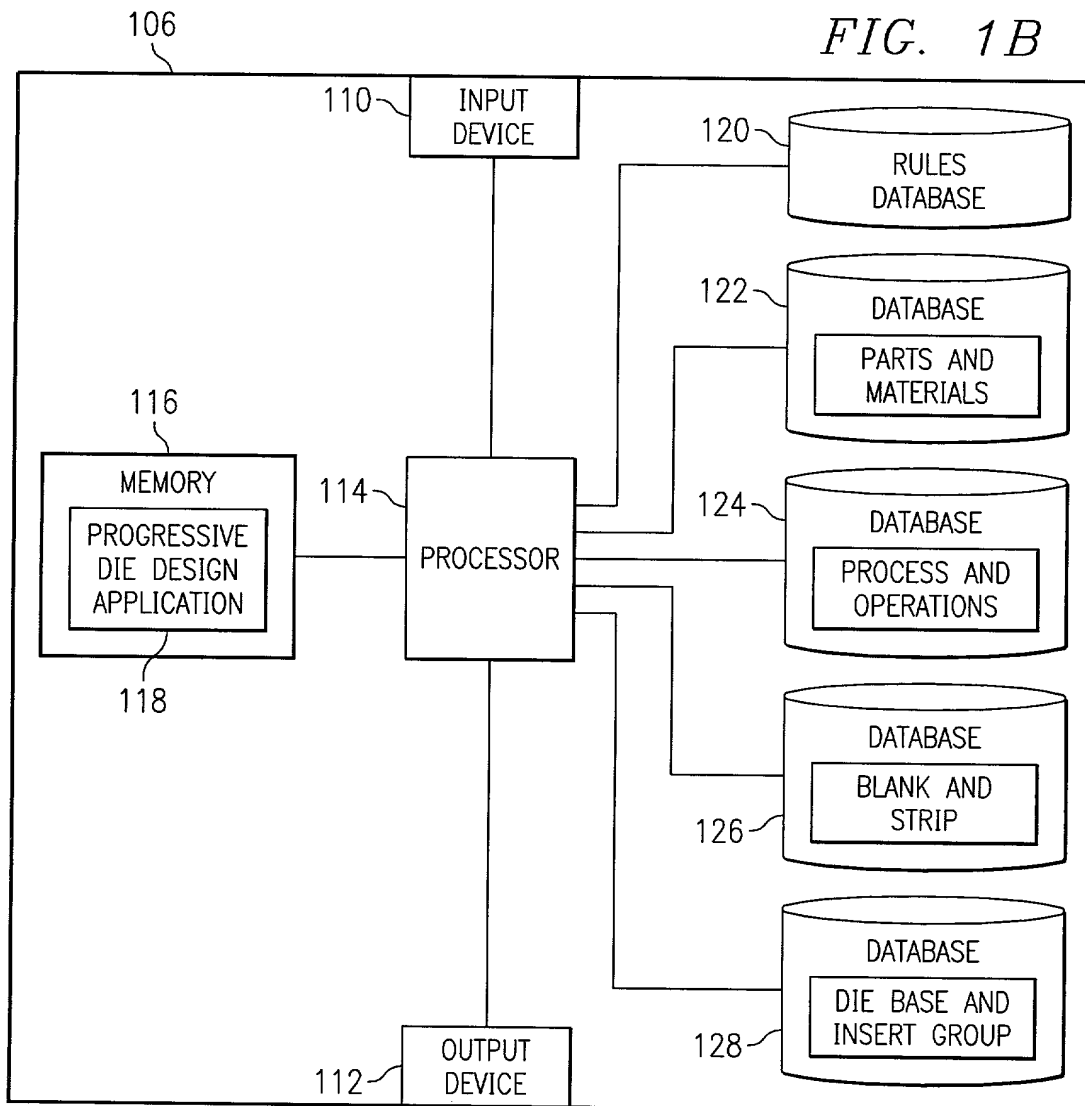


FIG. 1B



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FIG. 2

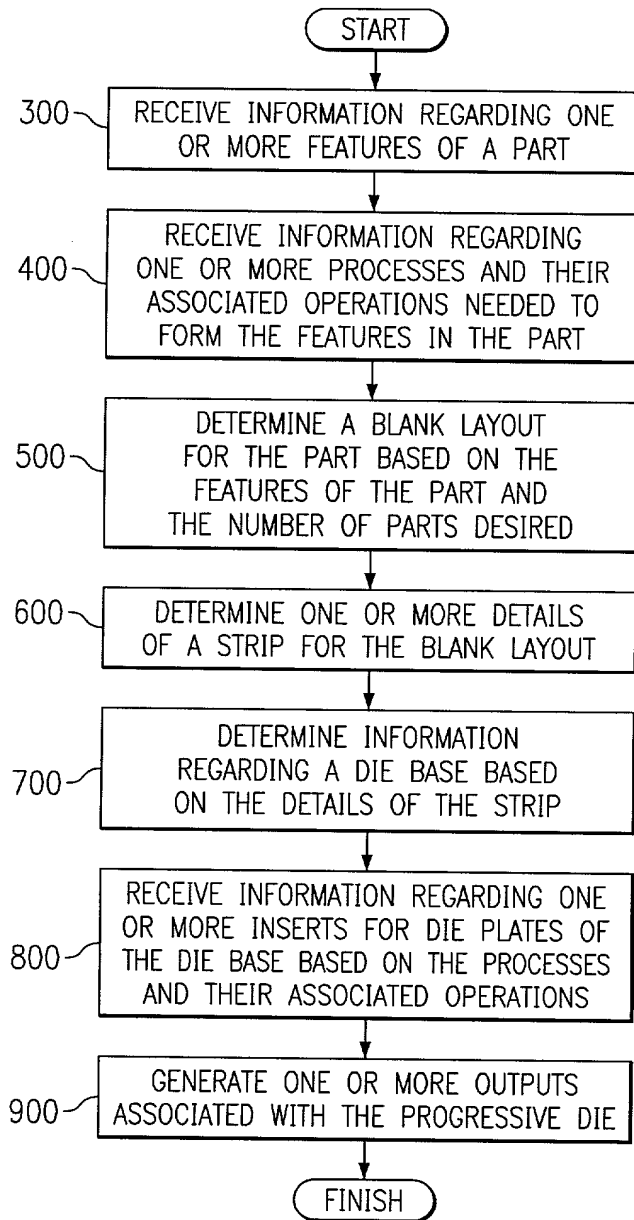
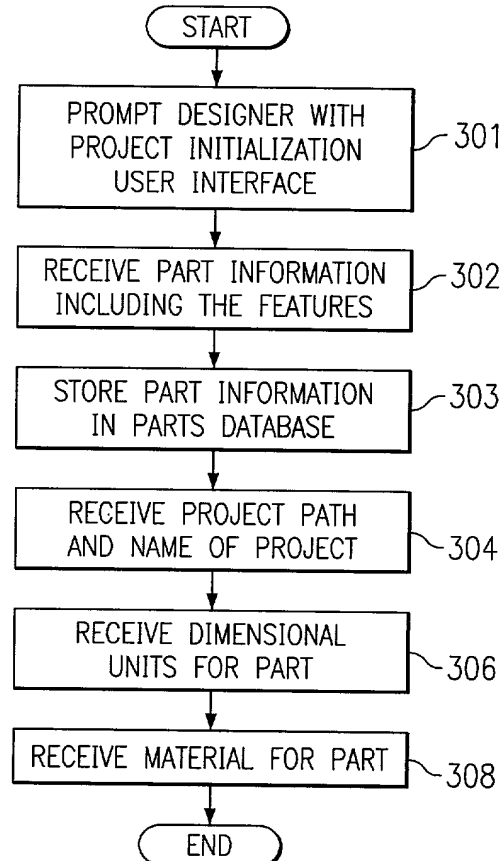


FIG. 3A

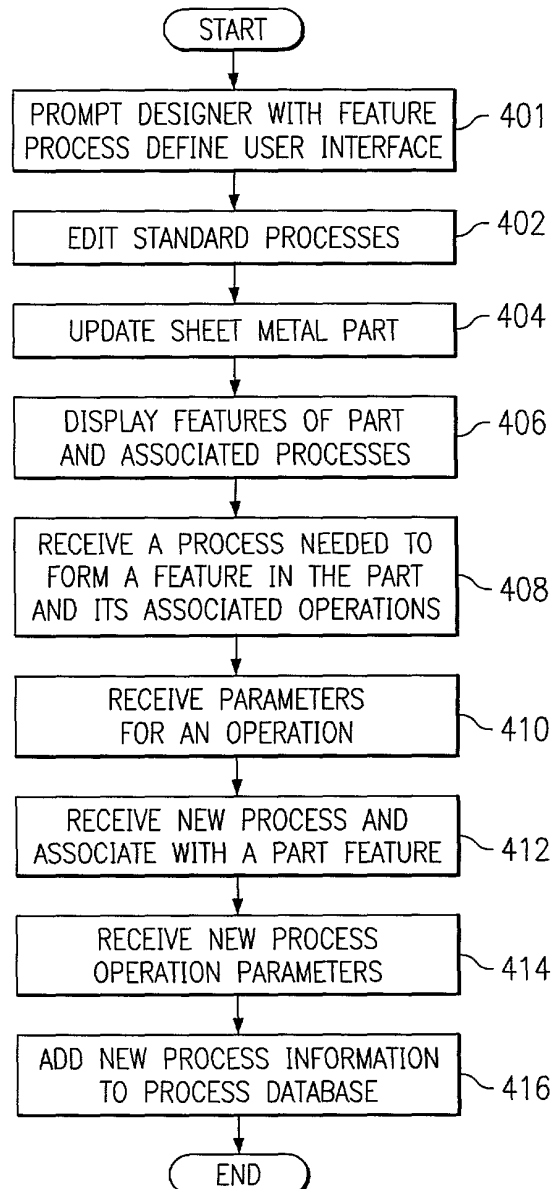


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FIG. 3B

FIG. 4A



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FIG. 4B

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450

Feature Process Define

451 Initialize Process 452 Standard Process 457 User Defined Process

Feature *

453

455

456

Defined Processes

454

Ok Apply Cancel

FIG. 4C

460

Process Selection

Process Type 461 Burring

Sub_Type

Burring 1 462

Options

Pierce Burr 463

Parameters

464

Parameter

Ok Apply Cancel

FIG. 5A

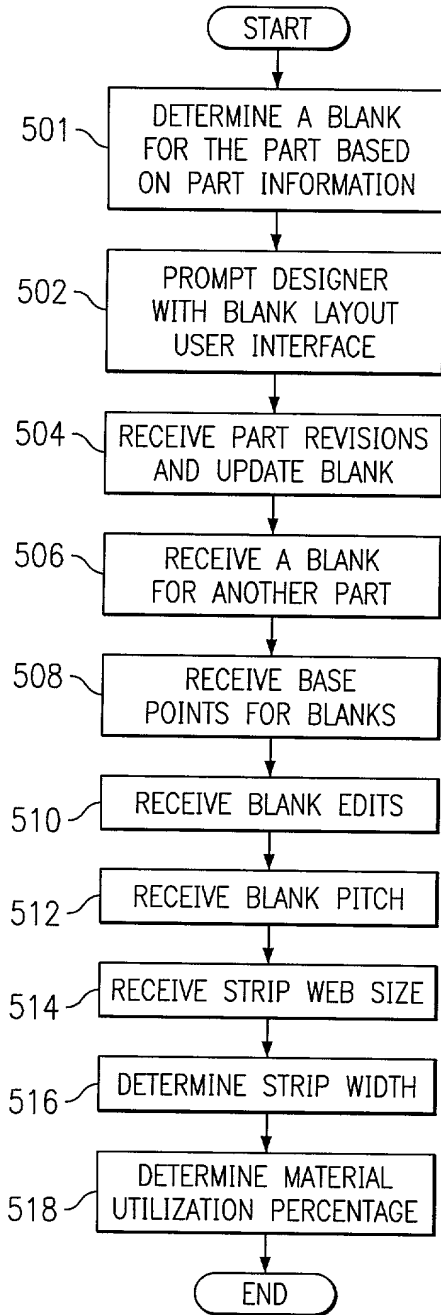
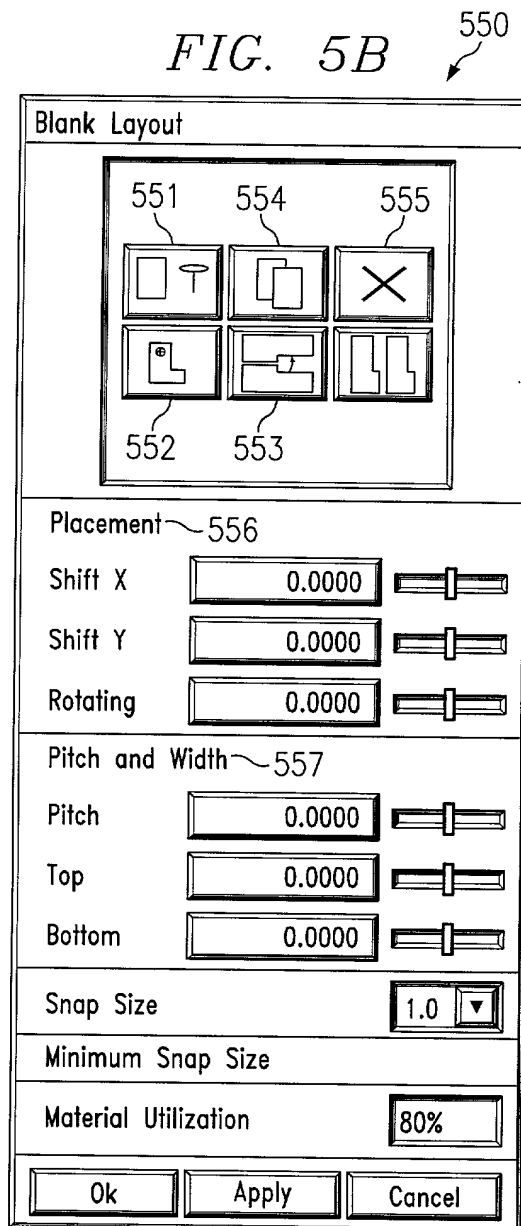


FIG. 5B



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FIG. 6A

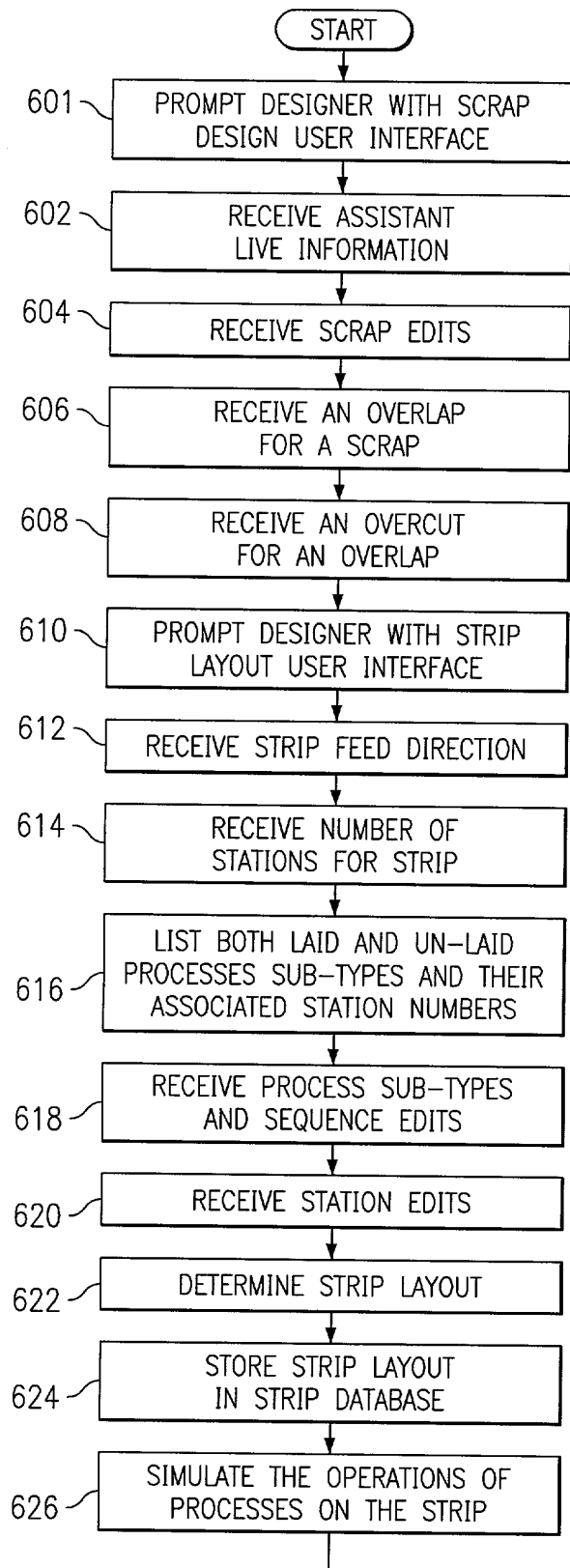
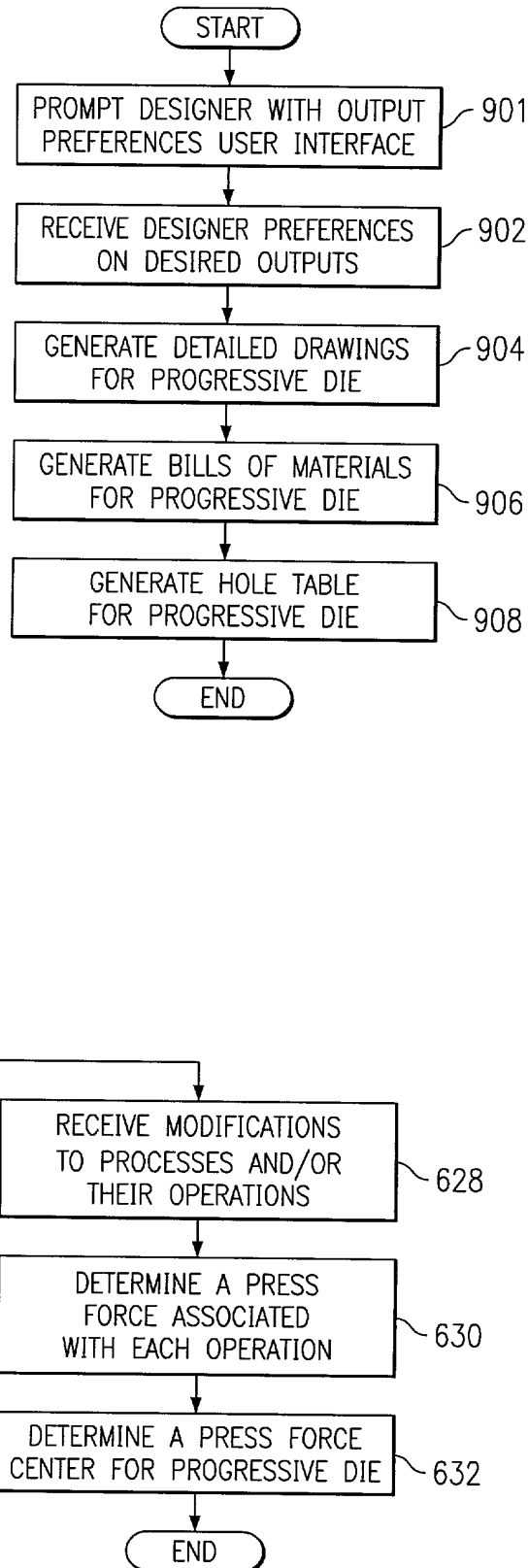


FIG. 9



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650
FIG. 6B

Scrap Design

Scrap Design Tools

652 653 654 655

651

Select Step

656

Overlap Value 0.0000

Remove Overlap

Select Step

657

Option Menu Rectangle

P1 0.0000

P2 0.0000

P3 0.0000

Remove Overcut

Select Step

Update Scraps

Ok Apply Cancel

FIG. 6C 660

Strip Layout

661 662

Initialize Strip Layout Process Simulation

Process Feature Type 663 ALL

Process Feature Name Station

process_01	1
process_02	2
process_03	3
process_04	3
process_05	5

664

process_01	1
process_02	2
process_03	3
process_04	3
process_05	5

665 667 668 666

Move Insert Idle

Load Design Save Design

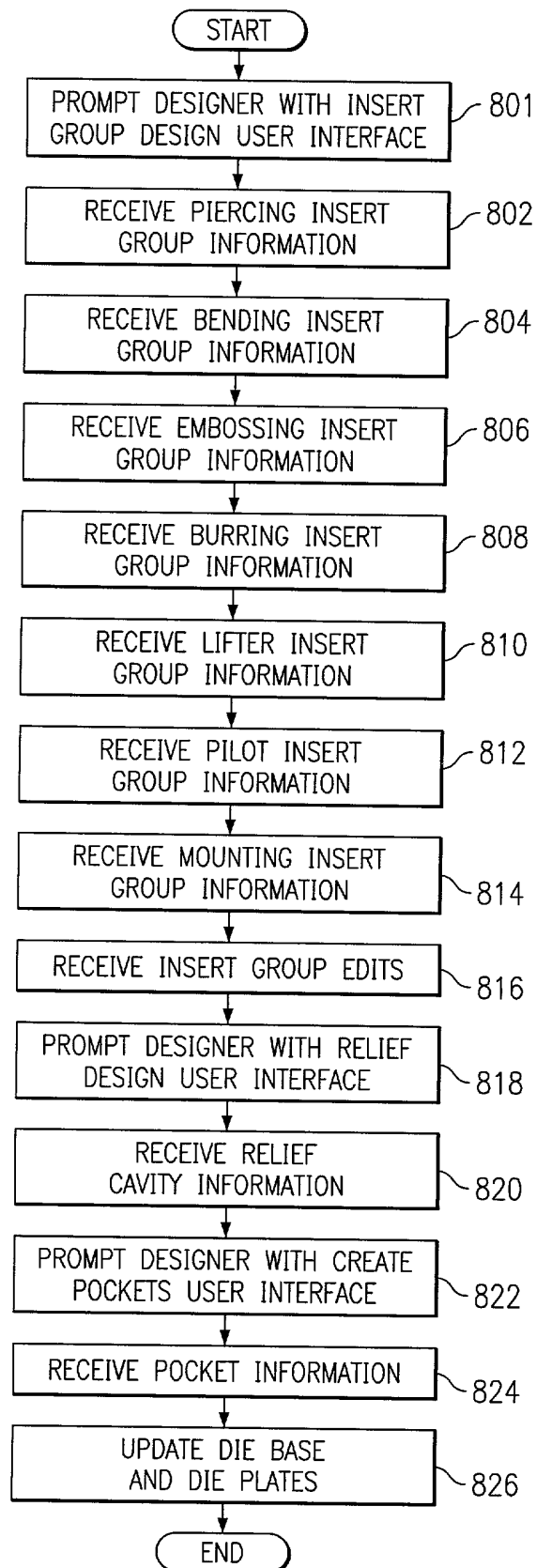
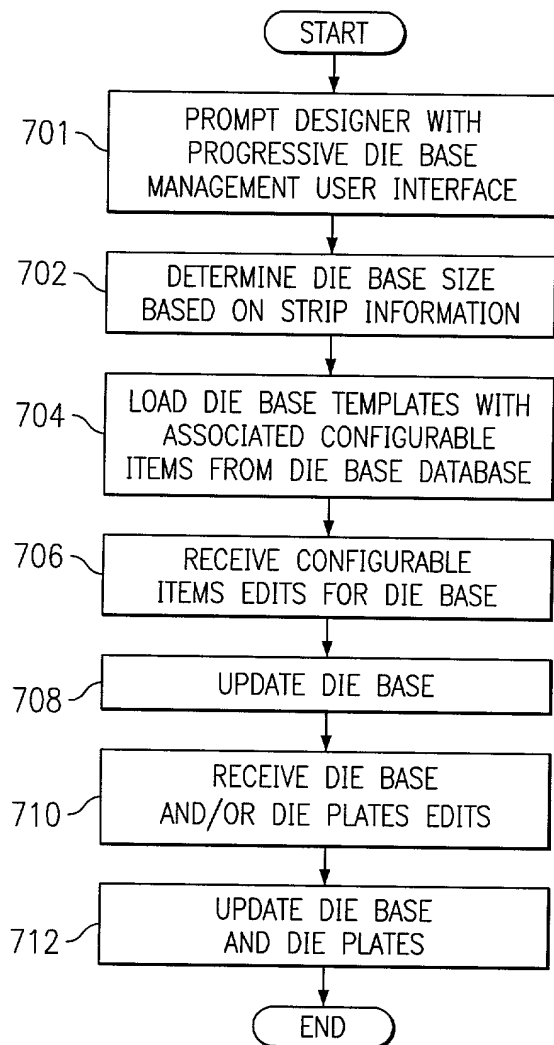
☒ Three Views

Ok Apply Cancel

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FIG. 8A

FIG. 7



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Insert Group Design

856 857 858

Lifter Pilot Mounting Tool

Piercing Bending Embossing Burring

851 855 852 853 854

Design Procedure

☒ Load Standard Punch ☐ User Defined Punch

FIG. 8B

850

860

FIG. 8C

Standard Part Management

Standard Part Tools

Catalog Empty List 12345699000

Type Empty List 1234567890

Tip A Tip B

Parent Empty List 1234567

Position Autoposition 1234567

Name

Dim_name= 0

☒ True ☐ False ☐ Both ☐ Add ☒ Modify

OPT0	Empty List 1234	SCALE0	00
OPT1	Empty List 1234	SCALE1	00
OPT2	Empty List 1234	SCALE2	00
OPT3	Empty List 1234	SCALE3	00
OPT4	Empty List 1234	SCALE4	00
OPT5	Empty List 1234		
OPT6	Empty List 1234		
OPT7	Empty List 1234		
OPT8	Empty List 1234		

Ok Apply Cancel